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STUDIES OF PERUVIAN BIRDS. IV

THE GENUS *MYRMOTHERULA* IN PERU, WITH NOTES ON EXTRALIMITAL FORMS. PART 2

BY JOHN T. ZIMMER

Myrmotherula ornata atrogularis Taczanowski

Myrmotherula atrogularis TACZANOWSKI, 1874, P. Z. S. London, p. 137—Amable Maria; ♂; type formerly in Warsaw Mus., now lost.

The original description of the females of this race from Monterico indicates the upper surface to be distinctly grayish, though tinged with brown, and the author's more complete description in the 'Ornithologie du Pérou' (p. 41) adds still further to this impression. Sharpe's description of his *Myrmotherula guayabambae* distinctly notes the gray dorsum of the females. The birds I collected in the upper Huallaga Valley agree with this diagnosis; the females have the upper surface noticeably grayish though washed with olivaceous or brownish. Hellmayr's comparison of the type of *guayabambae* and a specimen from Huambo also mentions this character. All these localities, including the type locality, are in the drainage of the Huallaga and Ucayali, and it seems probable that a single form is here represented. A male at hand from Santa Rosa, upper Ucayali, should belong to the same form for which *atrogularis* is the older name.

Females from southeastern Perú and northern Bolivia, in the drainage of the Madeira and its tributaries, have the back distinctly more brownish with the forehead brighter and more olivaceous, and seem to represent a previously unnamed form which is described below.

I believe that no good purpose is served in keeping *atrogularis* in a species apart from *ornata*. The principal difference between the two is in the presence or absence of the rufous "saddle" which is a variable feature also in the *haematonota* group and does not appear to be of full specific value. The females of *atrogularis* show the same gular pattern as *ornata ornata* and *o. saturata* to which they are closer in that respect than is *o. hoffmannsi* though it possesses the rufous "saddle" that *atrogularis* lacks. Taken together, the four forms here considered as conspecies form a fairly compact and homogenous group without any overlapping

of ranges though with some unfilled gaps in the known distribution, which may be filled when our knowledge of the intervening areas is greater.

Myrmotherula ornata saturata (Chapman)

Myrmopagis ornata saturata CHAPMAN, 1923, Amer. Mus. Novit., No. 96, p. 9—Upper Suno River, e. Ecuador; ♂; Amer. Mus. Nat. Hist.

A female of this form, collected by Carlos Olalla and sons at Puerto Indiana, is the only example known from Perú. This specimen is now in the collection of the Academy of Natural Sciences of Philadelphia. Through the kindness of Dr. Stone, I have been enabled to examine the specimen which is a typical example of the east-Ecuadorian form.

Myrmotherula ornata meridionalis, new subspecies

TYPE from the Río Tavara, southeastern Perú; altitude 1600 feet. No. 132, 715, American Museum of Natural History. Adult female collected May 28, 1915, by H. and C. Watkins; original number 143.

DIAGNOSIS.—Nearest to *M. o. atrogularis* of northern Perú, south of the Marañón, and males not clearly distinguishable, but females distinctly browner above, with the forehead brighter and more ochraceous.

RANGE.—Southeastern Perú and northwestern Bolivia; Tropical Zone.

DESCRIPTION OF TYPE.—Back Light Brownish Olive x Brownish Olive[1]; crown and nape a little darker; forehead brighter, strongly tinged with deep Ochraceous Buff; rump and upper tail-coverts a little brighter than the back, Light Brownish Olive x Dresden Brown. Lores, superciliary region, malar region, and anterior portion of auriculars bright Orange-Buff x Ochraceous Buff; posterior auriculars darker, more olivaceous. Chin and throat black with broad wedge-shaped tips of white; breast bright Orange-Buff x Ochraceous Buff; sides and flanks duller and browner; belly lighter; crissum like flanks. Remiges Hair Brown with outer margins more olivaceous; greater upper wing-coverts Dark Grayish Olive, more blackish subterminally, and tipped rather broadly with white, slightly buffy on the innermost feathers; middle and lesser coverts sooty with white tips; under wing-coverts and inner margins of remiges whitish, slightly tinged with buff; bend of wing ochraceous. Rectrices dark Hair Brown with slightly brighter margins; tail rounded, outer rectrices 8.5 mm. shorter than middle ones. Wing, 52 mm.; tail, 37; exposed culmen, 12.5; culmen from base, 16.5; tarsus, 16. "Iris brown; bill blue-black; feet slate."

REMARKS.—Males above Neutral Gray x Deep Neutral Gray; breast Neutral Gray x Light Neutral Gray; malar region Pallid Neutral Gray; lores and auriculars a little darker; belly paler, more whitish; flanks and crissum Light Brownish Olive; middle of belly sometimes more buffy. Tail and wings dark Hair Brown, with pale grayish outer margins; upper wing-coverts black with white tips which are more rounded on the middle and lesser series; wing lining white. Wing, 51–

[1]Names of colors when capitalised indicate direct comparison with Ridgway's 'Color Standards and Color Nomenclature.'

52 mm.; tail, 36–38.25; exposed culmen, 12–13.5; culmen from base, 15.25–16; tarsus, 16–17.

The approach toward *hoffmannsi*, indicated by the brown-backed females, is suggestive of a probable connection of the ranges of this form and *meridionalis* by way of the upper Rio Madeira, though no material is at hand from that region to substantiate this conjecture.

SPECIMENS EXAMINED

M. o. ornata.—COLOMBIA: "Bogota," 2♂; Buena Vista, 2♂, 1♀.

M. o. saturata.—ECUADOR: Río Suno, above Avila, 2♂ (incl. type), 2♀; lower Río Suno, 2♂, 2♀; below San José de Sumaco, 1♂, 3♀; mouth of Río Curaray, 10♂, 2♀; (Río) Napo, 2♀; Zamora, 2♂, 1 (?), 1♀. PERÚ: Puerto Indiana, 1♀.[1]

M. o. atrogularis.—PERÚ: Vista Alegre, 2♂[2]; Huachipa, 3♀[2]; Santa Rosa, upper Ucayali, 1♂.

M. o. meridionalis.—PERÚ: Río Tavara, 1♂, 1♀ (type); Astillero, 1♂, 2♀; La Pampa, 2♂, 1♀. BOLIVIA: Mission San Antonio, Río Chimoré, 1♀.

M. o. hoffmannsi.—BRAZIL: Rio Tapajoz, Caxiricatuba (right bank), 4♂, 2♀; Piquiatuba, 2♂, 1♀; Aramanay, 1♂; Rio Tocantins, Arumatheua, 1♂, 1♀; Rio Roosevelt, "Camp 17," 1♂.

Myrmotherula erythrura erythrura Sclater

Myrmotherula erythrura SCLATER, 'Cat. B. Brit. Mus.,' 1890, XV, pp. 230, 236, Pl. xv—Río Napo, Ecuador; ♀; British Mus.

A female from Puerto Indiana and two of the same sex from Apayacu (=Anayacu), both localities north of the Amazon, agree with a series from the Río Suno in Ecuador which represents typical *erythrura*. A female topotype is at hand but is very old and "foxy" so that it is not to be matched exactly by any of the others. A number of males from eastern Ecuador also are at hand and a pair from Tatú, Brazil, at the junction of the Rio Negro and the Rio Uaupés. The latter locality furnishes an extension of range for the species, not heretofore recorded from Brazil.

The females all agree well with each other in having the sides of the head and breast distinctly grayish brown, varying from dusky Drab or Hair Brown to Deep Mouse Gray on the auriculars; the sides of the breast are sometimes a little browner. The forehead also is grayish brown or even gray. The Puerto Indiana bird is the darkest of all in these respects.

Eight females from the Ucayali in Perú, south of the Amazon, show a noticeable difference in the more ochraceous tone of the sides of the

[1]Specimen in Academy of Natural Sciences, Philadelphia.
[2]Specimens in Field Museum of Natural History, Chicago.

head and breast. They agree in that respect with four females from the Río Pichis in the collection of Field Museum of Natural History, which I discussed in an earlier paper (Field Mus. Nat. Hist. Publ., Zool. Ser., XVII, p. 329, 1930). The amount of material now at hand is sufficient to make the separation of the southern form advisable, and it is described below.

In spite of certain rather abrupt differences between *gutturalis* of British Guiana and *erythrura*, I believe that these two species are closely related. In the long, slender tail, the style of spotting on the wing-coverts, the coloration of the lower under parts, the shape of the bill, and other smaller details, there is quite close approximation, especially with the females, and though I am not ready to unite the two groups specifically I believe that they should stand adjacent in the catalogues.

Myrmotherula erythrura septentrionalis, new subspecies

TYPE from Santa Rosa, upper Río Ucayali, Perú, No. 240,273, American Museum of Natural History. Adult female collected November 29, 1927, by Carlos Olalla and sons.

DIAGNOSIS.—Similar to *M. e. erythrura* from southeastern Ecuador but females separable by having the sides of the head and breast and the forehead ochraceous instead of gray or grayish brown; wing lining averaging slightly less pinkish buff; rufous of back inclined to be less extended anteriorly and somewhat paler in tone. Males not clearly distinguishable from those of *erythrura* but wing lining averaging slightly less pinkish buff; pale spots on upper wing-coverts usually smaller and whiter, less buffy; rufous of back inclined to be paler and less extended over the anterior part of mantle; gray of breast inclined to be paler; throat inclined to be whiter.

RANGE.—Eastern Perú and western Brazil, south of the Amazon, from the Ucayali (both banks) south to northern Puno and east to Teffé, Brazil.

DESCRIPTION OF TYPE.—Top of head Isabelline Dresden Brown; fore part of mantle darker (Dresden Brown x Light Brownish Olive); lower part of mantle bright rufescent (Sanford's Brown x Burnt Sienna); rump and upper tail-coverts somewhat paler and browner (Amber Brown). Lores dull Isabella Color; malar region and auriculars slightly darker but ochraceous, not grayish in tone; chin and throat deep Ochraceous-Buff; breast duller, approaching Cinnamon Buff, which darkens laterally and merges on the sides with the color of the anterior part of mantle; belly duller and paler; flanks and crissum browner (Isabella x Light Brownish Olive). Remiges fuscous, margined externally with olive-brown, more grayish at the base and more rufescent terminally and on the tertials; upper wing-coverts light olive-brown with triangular terminal spots of buffy white, largest on greater series, small but distinct on the lesser ones; wing lining light pinkish buff. Tail much graduated; external rectrices not much longer than under tail-coverts; rectrices Auburn x Sanford's Brown, margined exteriorly at base with an olive brownish tinge; all but median pair faintly dusky subterminally and finely tipped with a pale point. Bill black, tip of mandible whitish (dried skin); feet pale brownish. Wing, 55 mm.; tail, 41.5; exposed culmen, 10.5; culmen from base, 14.25; tarsus, 16.

REMARKS.—Males above much like the females but darker; forehead more grayish; sides of head, including superciliary region, pale gray; throat variable, grayish white to pale gray with or without visible blackish borders near the bases of the feathers; breast and sides Pale Neutral Gray to Light Neutral Gray; upper belly inclined to paler gray; lower flanks and crissum Isabella Color x Light Brownish Olive. Lesser and median upper wing-coverts Deep Mouse Gray, the greater series more olivaceous brown, all with a triangular terminal spot of whitish; primary-coverts with or without a tiny white spot at tips (in young birds the tips of the greater coverts are tinged with buffy). Wing-lining and tail as in the female. Bill blackish (in dried skins); feet dull, pale brown, the toes darker. Wing, 52–55 mm.; tail, 38–41; exposed culmen, 11–12.5; culmen from base, 15–16; tarsus, 15–16.5.

In typical *erythrura*, most of the males have distinct darker marginal markings on the central throat feathers toward their bases, in some cases decidedly blackish, giving the throat an obscurely streaked appearance. In a few skins these markings are obsolete. In *septentrionalis* the ground color of the throat averages a little paler with the dark markings more frequently obsolete and never as blackish nor as heavy as in the most extreme *erythrura*. The character, therefore, is of some value in the separation of the new race, though not of constant importance. Several of the males of *septentrionalis* have the greater upper wing-coverts buffy but in every such case this row of coverts appears to be part of the immature plumage. Not only are the tips buffy but the webs in general are rather rufescent brown than grayish and there is a corresponding immaturity shown by the brown, instead of grayish, primary-coverts which are marked by cinnamomeous terminal spots that are absent in fully adult birds. Even in these birds there is little indication of buff on the spots of the middle and lesser coverts. In typical *erythrura*, however, the adult males have the greater coverts noticeably buffy, and even the middle and lesser series are frequently also tinged with buff, especially in young birds. If adults only are used for comparison, this character also seems to be of value.

Three females from Teffé, Brazil, are like the Ucayali birds, though one of them shows perhaps the nearest approach to typical *erythrura* of any of the series.

The Yahuarmayo record by Hellmayr (Arch. Naturg., LXXXV, A, (10), p. 97, 1920) belongs with this new form.

SPECIMENS EXAMINED

M. e. erythrura.—ECUADOR: (Río) Napo, 1 ♀; Río Suno, above Avila, 3♂, 3♀; lower Río Suno, 3♂; below San José, 2♂, 2♀; mouth of Río Curaray, 2♂, 3♀. PERÚ: Puerto Indiana, 1♀; Apayacu, 2♀. BRAZIL: Tatú, Rio Negro, 1♂, 1♀.

M. e. septentrionalis.—PERÚ: Santa Rosa, upper Ucayali, 10♂, 7♀ (incl. type); Lagarto, upper Ucayali, 1♂; Puerto Bermúdez, Río Pichis, 1♂[1], 4♀[1]; La Pampa, Río Tavara, 2♂, 1♀. BRAZIL: Boca Lago, Teffé, 3♀.

M. gutturalis.—BRITISH GUIANA: Tumatumari, 2♂; Potaro Landing, 1♀; Minnehaha Creek, 1 "♀" (=♂). BRAZIL: Obidos, 1♂; Faro, 4♂, 7♀.

Myrmotherula axillaris melaena (Sclater)

Formicivora melaena SCLATER, 1857 (October), P. Z. S. London, XXV, p. 239—Bogotá; ♂; British Mus.

Birds from Puerto Indiana, at the mouth of the Napo, are quite distinctly referable to *melaena* and agree well with a large series from eastern Ecuador, upper Rio Negro in Brazil, upper Orinoco region of Venezuela, and eastern Colombia. This series shows *melaena* to be extremely variable within certain limits. Some of the males are not to be distinguished clearly from *albigula* of Central America and western Colombia and Ecuador, being deep glossy black except for the characteristic white markings. Others of the series are decidedly duller and sootier, and some develop a noticeably grayish tone above through the acquisition of faint gray fault bars on the distal portion of the feathers of the head and back. As a rule, however, there is no strong demarcation between the throat and the sides of the head although it sometimes occurs throughout the range.

The females vary in the warmth of the brown color on the back and the depth of the ochraceous color beneath. The throat is usually noticeably whitish. I can find no recognizable differences in the series mentioned which includes specimens from both banks of the upper Rio Negro as far east as the vicinity of Santa Isabel. East of the Rio Branco, *axillaris* occurs on both banks of the Negro and thence south to the Amazon which it crosses to enter the region on both banks of the lower Madeira, thence ranging southward to northwestern Matto Grosso, at least on the east bank of the Gy-Paraná.

South of the Amazon and Marañón rivers in Perú and western Brazil (Teffé), the birds are usually easily referable to *melaena*, but an occasional male is a little grayer than any of the northern examples. The females are all of the *melaena* plumage. What the upper Juruá and Purús examples may be, I cannot say without material from those

[1]Specimens in Field Museum of Natural History, Chicago.

regions. They have been assigned to *axillaris* by Hellmayr and others who have examined them, and are evidently of a gray-backed form. Skins that I have from Perú on the lower Ucayali are inseparable from *melaena*, though others are reported by Hellmayr to be closer to *axillaris*. It is evident, therefore, that a considerable area of transition exists in which both extremes of masculine plumage may occur, and the upper Juruá and upper Purús may belong in this area.

From farther up the Ucayali, all the males I have are definitely gray-backed, resembling *axillaris*, but still more closely resembling Bolivian birds in that the under tail-coverts are usually much more blackish and more sharply and narrowly tipped with white. The females, however, remain closer to *melaena* and are separable from *axillaris* females by much the same characters as *melaena*. We thus have the curious circumstance of a region in which the males are almost identical with one subspecies and the females with another. They are not simple intermediates, for one sex of each adjacent form is practically intact. Consequently, I believe it justifiable to name this form in which two forms are seemingly "mismated."

Myrmotherula axillaris heterozyga, new subspecies

TYPE from Santa Rosa, upper Río Ucayali, Perú. No. 240,259, American Museum of Natural History. Adult female collected December 3, 1927, by Carlos Olalla and sons.

DIAGNOSIS.—Female almost indistinguishable from *M. a. melaena* females but inclined to be a trifle grayer above, less brownish. Separable from *axillaris* females by being decidedly grayer on the upper surface, with the outer margins of the remiges and rectrices duller and less deeply rufescent, and the throat usually less whitish. Compared with *lafresnayana*, the females are distinctly less deeply ochraceous below with the throat and sides of head more whitish. Males nearly indistinguishable from males of *M. a. lafresnayana* but inclined to be slightly darker gray above; much paler than *melaena;* white tips of rectrices sometimes absent and never very large.

RANGE.—The upper reaches and tributaries of the Río Ucayali, eastern Perú.

DESCRIPTION OF TYPE.—Crown, back of head and neck, and mantle slightly grayer than Brownish Olive; forehead Light Brownish Olive; lower back slightly browner; upper tail-coverts brighter, more cinnamomeous. Lores whitish, tinged with buff; a barely distinguishable superciliary stripe light buffy; auriculars like crown at tips but with shafts rather conspicuously whitish; malar region pale ochraceous; throat white basally but with tips of feathers pale ochraceous, giving the area the appearance of being buffy white; breast and belly pale clay color; sides of breast browner, merging into the color of the back; flanks and axillaries silky white largely concealed by ochraceous tips; under tail-coverts bright Sudan Brown x Mars Yellow. Remiges Fuscous; exterior margins Sayal Brown x Tawny Olive; inner margins Pinkish Buff; upper wing-coverts similar with rather broad tips of cinnamomeous

Clay Color becoming obsolete on the lesser series; under wing-coverts orange-tinted Ochraceous Buff on outer portion but becoming white toward the humeral angle and merging with the white of the axillaries. Tail Fuscous with brighter rufescent brown margins. Wing, 50.75 mm.; tail, 34; exposed culmen, 12.25; culmen from base, 15.5; tarsus, 16.

REMARKS.—Males Deep Neutral Gray x Dark Neutral Gray above, rather lighter on sides of head and sides of breast; median under parts, from chin and throat to crissum, black; flanks and wing-lining silky white; under tail-coverts black with relatively narrow white tips; upper tail-coverts usually distinctly blackish; lesser upper wing-coverts at radial margin of wing, and outer border of scapulars white forming a large patch which may be more or less concealed; submargins of scapulars blackish; remainder of upper wing-coverts black with white tips which are usually rounded. Remiges sooty blackish with outer margins or submargins deeper in color and margins occasionally very narrowly touched with white. Tail black, sometimes with narrow white tips on outermost two or three pairs, sometimes without white. Wing, 51.5–57 mm.; tail, 33–37; exposed culmen, 12.25–13; culmen from base, 15–16; tarsus, 15–16.

Female type and paratypes measure: wing, 48–53.75 mm.; tail, 32–37; exposed culmen, 12.25–12.75; culmen from base, 15.5–16; tarsus, 15.75–16.

I must confess that the differences indicated in the diagnosis are so slight that in the absence of one or the other sex I would not attempt to separate the present subspecies from *lafresnayana* on the one hand, or from *melaena* on the other, though the characters exist as described. Nevertheless, with both sexes in hand it is quite impossible to refer these birds to either of the adjacent forms. The transition between the females of *heterozyga* and *lafresnayana* should take place, if anywhere, on some of the affluents of the upper Purús or Madre de Dios, a rather roundabout way, since there is no more direct and uninterrupted connection at present. The connection with *melaena* is much more direct, granted that the Marañón is not an effective barrier in the present instance.

The upper Ucayali males are relatively quite uniform and distinct from most of the males found along the south bank of the Marañón and upper Amazon and the lower Ucayali rivers. These latter birds are far from uniform though most of them are clearly referable to *melaena;* several skins approach *heterozyga* quite closely.

Myrmotherula axillaris lafresnayana D'Orbigny and Lafresnaye

T(hamnophilus) Lafresnayanus D'Orbigny and Lafresnaye, 1837, Mag. Zool., VII, cl. II, p. 13—Yuracares (Rep. Boliviana); ♀; Paris Mus.

A female from Astillero, southeastern Perú, agrees perfectly with a series of Bolivian females that are recognizably distinct from *axillaris*, to which the males bear the greatest resemblance. It seems, therefore, that a subspecies may be distinguished in this general region to which the name *lafresnayana* may be applied. The salient characteristic of the females is the rather uniform clear ochraceous color of the under parts, distinctly deeper, in most cases, than in *axillaris* and including the throat and sides of the head which are whitish in *axillaris*. Crissum usually much tawnier. The upper surface tends to average grayer than in *axillaris*, although some skins of the latter form are not distinguishable on that account.

The males are not so easily separable though they appear to average a trifle paler gray and to have the lower belly, crissum, and upper tail-coverts more often blackish than gray. The under tail-coverts, furthermore, are less broadly, though more sharply, tipped with white. Possibly the white tips of the rectrices average narrower than in *axillaris* but, except in extreme examples, the difference is of no service in distinguishing the forms.

An adult male and a very young one from the junction of the Beni and Mamoré appear to be assignable rather to typical *axillaris*, which occurs farther down the Madeira, but without more material it is impossible to say, without question, that this point is outside the range of *lafresnayana*. A single female from Monte Cristo (to the west of the upper Gy-Paraná) is much like *lafresnayana* below though warmer brown above. Other Matto Grosso females are like typical *axillaris*. Males are somewhat intermediate, having the under tail-coverts gray with broad black subterminal bands and white tips, and the general coloration lighter gray than in *axillaris*. Without more material from Matto Grosso it is impossible to fix the ranges in this region with any certainty.

Hellmayr's record of *axillaris* (Field Mus. Nat. Hist. Publ., Zool. Ser., XIII, pt. 3, p. 150, 1924) from Yahuarmayo, Río Inambari, Perú, must belong also to *lafresnayana*.

Specimens Examined

M. a. albigula.—Panamá: 18 ♂, 14 ♀ (incl. types). Nicaragua: 1 ♂. Colombia: Cauca Valley and Pacific coast region, 4 ♂, 4 ♀. Ecuador (west); 5 ♂, 3 ♀.

M. a. melaena.—Colombia: "Bogotá," 1 ♂, 1 ♀[1]; La Morelia, 2 ♂, 1 ♀; Floren-

[1]Specimens in Field Museum of Natural History, Chicago.

cia, Caquetá, 3♂, 2♀. VENEZUELA: region of upper Río Orinoco, Mt. Duida and Río Cassiquiare, 53♂, 43♀; Orope, Zulia, 3♂,[1] 1♀.[1] BRAZIL: Rio Negro (Tatú, San Gabriel, Yavanari, Mt. Curycuryari, and Santa Maria), 9♂, 10♀; Rio Uaupés, Tahuapunto, 1♂; Boca Lago, Teffé, 3♂, 4♀. ECUADOR: Zamora, 4♂, 1♀; mouth of Lagarto Cocha, 1♂; mouth of Río Curaray 9♂, 3♀; below San José, 1♂, 2♀; Río Suno, above Avila, 4♂, 4♀; lower Río Suno, 3♂, 3♀. PERÚ: Puerto Indiana, 11♂, 9♀; Moyobamba, 1♂,[1] 1♀[1]; Yurimaguas, 2♀[1]; Rioja, 1♂[1]; Pomará, Río Marañón, 2♂, 3♀; Sarayacu, Río Ucayali, 4♂, 4♀; Orosa, Río Amazonas, 1♂, 1♀.

M. a. heterozyga.—PERÚ: mouth of Río Urubamba, 2♂; Santa Rosa, upper Ucayali, 8♂, 5♀ (incl. type); Puerto Bermúdez, 1♀,[1] 1♀.[1]

M. a. lafresnayana.—BOLIVIA: Mission San Antonio, 3♂, 4♀; mouth of Río San Antonio, 5♂, 1♀; Río Espiritu Santo, 1♂; Santa Cruz, Río Surutú, 1♀; Todos Santos, 5♂, 6♀. PERÚ: Astillero, 1♀.

M. a. axillaris.—FRENCH GUIANA: 6. BRITISH GUIANA: 23♂, 16♀. VENEZUELA: Maripa, 1♂; Suapuré, 2♂, 1♀; La Unión, Caura Valley, 2♂, 4♀; Sacupana, 1♂. BRAZIL: Faro, Rio Jamundá, 15♂, 8♀; Rio Negro (Muirapinima, Igarapé Cacao Pereira, and Manaos), 17♂, 6♀; Rio Tapajoz, 15♂, 6♀; Rio Xingú, 5♂, 1♀; Villa Bella Imperatríz, Rio Amazonas, 6♂, 3♀; Utinga, Pará, 1♂; Rio Madeira, 11♂, 5♀; Tury-assú, Maranhão, 1♂,[1] 2♀[1]; São Antonio, Goyaz, 1♀[1]; Matto Grosso (Utiarity, Rio Roosevelt, and Barão Melgaço), 4♂, 4♀. [?BOLIVIA: falls of the Rio Madeira, 2♂].

Myrmotherula schisticolor interior (Chapman)

Myrmopagis schisticolor interior CHAPMAN, 1914, Bull. Amer. Mus. Nat. Hist., XXXIII, p. 614—Buena Vista, Colombia; ♀; American Mus. Nat. Hist.

In a series from eastern Colombia, eastern Ecuador, and northern Perú, I am unable to detect any recognizable differences. There is much variation in the extent of the black on the lower breast and the tone of gray exhibited by the males, while the females also vary in the tone of ochraceous ventral coloration, but this is shown by birds from the same regions and is not of diagnostic value. The Peruvian males are more frequently inclined to show whitish tips on the black and gray feathers of the lower breast, but the feature is absent as often as it is present. One male from Huarandosa, Río Chinchipe, has a broad, concealed area of white across the breast which obviously is abnormal.

Inadvertently I omitted an account of this species from my report on the birds of the Marshall Field Peruvian Expedition of Field Museum of Natural History (Field Mus. Nat. Hist. Publ., Zool. Ser., XVII, No. 7, 1930). Three males and two females were secured at Huachipa, September 21–28, and compared with a male from Bogotá and a small series of *M. s. schisticolor*. A slight difference was observed between the two females in that one was less purely gray above (more tinged with olivaceous) and paler ochraceous below, exhibiting the same differences

[1]Specimens in Field Museum of Natural History, Chicago.

that are shown in some of the material now before me. According to Hellmayr (Field Mus. Nat. Hist. Publ., Zool. Ser., XIII, pt. 3, p. 154, footnote *b*, 1924), females from the Marcapata district of Perú are similarly variable.

In addition to the material recorded below there are records from Huambo, Amable Maria, Paltaypampa, and Huaynapata, Perú.

SPECIMENS EXAMINED

M. s. schisticolor.—PANAMÁ, NICARAGUA, GUATEMALA, and COSTA RICA: 20♂, 17♀. COLOMBIA (Antioquía and Cauca regions): 11♂, 3♀. ECUADOR (west and south to Alamor: 16♂, 8♀.

M. s. sanctae-martae.—COLOMBIA: Santa Marta region, 2♂ (incl. type), 2♀ (incl. type of *Hylophilus brunneus* Allen). VENEZUELA: 6♂, 2♀.

M. s. interior.—COLOMBIA: Buena Vista, 3♂, 3♀ (incl. type); Aguadita, 1♂; La Palma, 1 "♀" [=♂], 1♀; La Candela, 1♂, 1♀; "Bogotá," 1♂.[1] ECUADOR: Lower Sumaco, 4♂, 1♀; Río Oyacachi, 1♂; PERÚ: Lomo Santo, Río Marañón, 2♂, 1♀; Huarandosa, Río Chinchipe, 1♂; Santa Rosa, Río Marañón, 2♂; Chaupe, 5♂; Huachipa, Río Huallaga, 3♂,[1] 2♀.[1]

Myrmotherula longipennis longipennis Pelzeln

Myrmotherula longipennis PELZELN, 1868 (September), 'Orn. Bras.,' p. 153—Rio Negro, Marabitanas (Brazil); ♂, ♀; Vienna Mus.

Two perfectly typical females of the typical subspecies are at hand from Apayacu, Río Amazonas, Perú, and mark the most southeastward extension of range known for this form. Apayacu is a small river which flows into the Amazon from the north between the Napo and the Ampiyacu where Pebas is situated, and is given on some maps as Anayacu. The collecting station appears to have been on an island at the mouth of this stream. Since *longipennis* occurs at this locality there is every reason to suspect that it continues westward to the east bank of the Napo. There are no earlier records of this subspecies from Perú.

Myrmotherula longipennis garbei Ihering

Myrmotherula garbei IHERING, 1905, Rev. Mus. Paulista, VI, p. 441, Pl. xv, fig. 1—Rio Juruá, Brazil; Mus. Paulista.

The material at hand justifies my supposition (Field Mus. Nat. Hist. Publ., Zool. Ser., XVII, p. 330, 1930) that the form of *longipennis* occurring in eastern Perú is *garbei* and not *zimmeri*. The surprising discovery is that this form also crosses the Amazon below Iquitos and occurs on the left bank of the Napo at its mouth, while *zimmeri* seems to be restricted to the region of the Río Suno and the Río Curaray in

[1]Specimens in Field Museum of Natural History, Chicago.

Ecuador. The males from the mouth of the Napo are equivocal but a female is unquestionably in closer agreement with birds from the Ucayali, and from Teffé, than with the type and two other females of *zimmeri*.

At the same time I have examined a skin of this species from La Morelia, Colombia, which I am inclined to think is closer to typical *longipennis* than to the east-Ecuadorian race. There are traces of white on the sides of the throat but not pronouncedly on the auriculars, and these seem to be rather the remains of juvenal plumage than the characteristics of adult *zimmeri*. The skin can be matched rather closely with examples of *longipennis* but not with *zimmeri*, though this may be explainable by reason of the much larger series of *longipennis* at hand. Two males and a female are at hand from Rosarinho, on the left bank of the Madeira. The males are equivocal and could be referred to either *garbei* or *ochrogyna*, with perhaps more resemblance to *ochrogyna* in the restricted black area of the throat. The female, however, is a definite *garbei* and shows that the range of this upper Amazonian form extends eastward to the left bank of the Madeira.

Two young males of *garbei* from the Ucayali are exactly like the adult males above; below the throat is grayish white, and the rest of the under parts dull gray, with a few black feathers appearing on the lower throat and upper breast. They are quite unlike young *longipennis* which are brown above, buffy on the breast, more whitish on the throat, and rufescent brown on the wings and tail, and in which the throat becomes almost entirely black before the brown and buff disappear in the rest of the plumage.

Specimens Examined

M. l. longipennis.—Brazil: Tatú, Rio Negro, 7♂, 3♀; Mt. Curycuryari, Rio Negro, 4♂, 9♀; Yucabi, 2♂, 4♀; Tabocal, 2♂, 2♀; Tahuapunto, Rio Uaupés, 1♂, 3♀. Venezuela: Mt. Duida, 7♂, 3♀; Río Huaynía, 4♂, 2♀; Río Cassiquiare, Solano, 1♂; La Unión, Caura, 1♂; Suapuré, 1♂, 2♀. British Guiana: Potaro River, 1♂; Potaro Landing, 1♂; Tumatumari, 1♂, 1♀; Minnehaha Creek, 1♂; Arwye Creek, 1♂; Macouria Creek, 1♀. Colombia: ? La Morelia, 1♂.

M. l. zimmeri.—Ecuador: upper Río Suno, 1♂, 1♀ (type); lower Río Suno, 1♂, 1♀; mouth of Curaray, 2♂, 1♀. Perú: Apayacu, Río Amazonas, 2♀.

M. l. garbei.—Perú: Santa Rosa, Río Ucayali, 2♂; mouth of Río Urubamba, 1♂, 1♀; Puerto Bermúdez, 1♂[1]; Puerto Indiana, 2♂, 1♀. Brazil: Santo Isidoro, Teffé, 1♂; Boca Lago, Teffé, 2♀; Caviana, 1♂[2]; Arimã, Rio Purús, 1♂[2]; Hyutanahan, Rio Purús, 1♂[2]; São Paulo de Olivença, 2♂[2]; Rosarinho, Rio Madeira (left bank), 2♂, 1♀.

[1]Specimen in Field Museum of Natural History, Chicago.
[2]Specimens in Carnegie Museum, Pittsburgh.

M. l. ochrogyna.—BRAZIL: Limõal, Rio Tapajoz, 2♂; Villa Bella Imperatríz, Lago Andirá, 2♂, 3♀; Serra de Parintins, 1♂, 1♀; Igarapé Auará, Rio Madeira (right bank), 2♂, 4♀; Borba, 1♀.

M. l. transitiva.—BRAZIL: Barão Melgaço, 1♂; Rio Teodoro, 1♂, 1♀.

M. l. paraensis.—BRAZIL: Utinga, near Pará, 1♂, 1♀; Victoria, Rio Xingú, 1♂; Santa Elena, Rio Jamauchim, 1♀.

Myrmotherula minor subspecies ?

An immature male bird from Sarayacu, Río Ucayali, presents a curious problem which I am unable to solve at the present writing. In general aspect it might be taken for a young *M. menetriesii menetriesii*, which occurs on the Ucayali, but in certain particulars it bears a greater resemblance to *M. sunensis* and *M. minor*. It is slightly paler above than either *sunensis* or *minor* but darker than *m. menetriesii*. The under parts show mixed juvenal and adult plumage. The throat is buff; the upper breast has the feathers black nearly to their bases but rather broadly tipped with buff; some of these feathers still in the sheath have the tips gray. The sides are dull brownish buff with some juvenal feathers rather brighter. The lower breast is buff with gray bases. The flanks are gray, faintly buffy as in half-grown *m. menetriesii;* the middle of the belly is orange ochraceous, being replaced by pale gray; the lower flanks are browner. The under tail-coverts are brownish buff. The under wing-coverts are dull whitish. The upper wing-coverts are dull gray tipped with clay color but new feathers are black with white tips, in place only among the lesser series. The remiges are blackish, margined externally with the gray of the back except on the two outermost which are edged with ochraceous. Tail dark gray with an ill-defined blackish area terminally or subterminally and fine whitish tips on the two outer pairs. The bill is quite small as in *sunensis* and *minor* and much smaller in every way than in *m. menetriesii;* it is deep black in color. The sides of the head are dull whitish or buffy white including the prominent shafts of the auriculars, but the tips of the auriculars are dusky gray. Wing, 51.5 mm.; tail, 25.5; culmen from base, 15; exposed culmen, 11; tarsus, 15.

A female from the Río Suno, above Avila, Ecuador, may belong with this male. It is grayish brown above, rather lighter than females of *sunensis*, and with the forehead grayish but not at all ochraceous. Sides of the head as in the Sarayacu male but with tips of auriculars more olivaceous brown than gray. Throat white in a distinct patch, with fine dusky terminal fringes, not at all conspicuous. Breast dull pale buff; sides and flanks browner, much darker posteriorly. Under tail-coverts

brownish buff. Under wing-coverts whitish, slightly buffy. Upper wing-coverts inconspicuously margined with dull rufescent brown. Wings and tail dusky, margined with the color of the back. Wing, 54 mm.; tail, 29; culmen from base, 14.5; exposed culmen, 11; tarsus, 16.5. In the white throat and other characters, this bird answers closely to the description of female *minor*, though I have none of that sex for comparison. Compared with *sunensis* females, this specimen is paler above and decidedly paler below but so near in size and apparent affinities that I am unwilling to separate it from *sunensis* which occurs at the same locality. If it is an example of aberrant *sunensis* it points to a decidedly close relationship of that form with *minor*.

Although *M. minor* is largely confined to the states of Rio de Janeiro and São Paulo in southeastern Brazil, Madam Snethlage has recorded it once from the Rio Purús. I must refer my Sarayacu bird to the same species, though I judge it to represent an undescribed subspecies which I am unwilling to name without more nearly adult material. Probably *minor*, *sunensis*, and this western Amazonian form will be found to form a specific group by themselves.

SPECIMENS EXAMINED

M. minor.—BRAZIL: Meatuba, São Paulo, 1 ♂.

M. minor subspecies.—PERÚ: Sarayacu, 1 ♂.

M. sunensis.—ECUADOR: Río Suno, above Avila, 2 ♂, 1 ♀; lower Río Suno, 2 ♂, 2 ♀ (incl. type); below San José, 1 ♂; mouth of Río Curaray, 2 ♂, 2 ♀.

Myrmotherula menetriesii pallida Berlepsch and Hartert

Myrmotherula cinereiventris pallida BERLEPSCH AND HARTERT, 1902, Novit. Zool., IX, p. 74, part—Nericagua, Venezuela.

The only Peruvian skins of this subspecies at hand are from near the mouth of the Napo. They agree with others of a long series from southeastern Venezuela, the Rio Negro, Brazil, eastern Colombia, and eastern Ecuador. The form ranges westward along the north bank of the Marañón through Pebas, Iquitos, and the Río Tigre and, according to Hellmayr, crosses the Marañón to its south bank, west of the junction of the Huallaga; records are from Chyavetas and Yurimaguas. A similar distribution is shown by certain other members of the family such as *Schistocichla leucostigma subplumbea*, previously discussed (Amer. Mus. Novit., No. 500, p. 18, 1931). East of the Huallaga, *pallida* is replaced by typical *menetriesii*, treated below.

Berlepsch and Hartert, in the original description of this subspecies, included birds from Suapuré and Caura River (Venezuela) in this form

as distinct from the Guianan *M. m. cinereiventris*. Hellmayr (Field Mus. Nat. Hist. Publ., Zool. Ser., XIII, pt. 3, p. 162, 1924) considered Caura River examples to belong rather with *cinereiventris*. Two adult males, a young male, and an adult female at hand from Suapuré and the Caura and Mato rivers seem rather to confirm the conclusions of Berlepsch and Hartert. The adult males are as dark as *cinereiventris* but can be matched exactly in some of the series of *pallida* from the Rio Negro, Brazil, while the adult female and the young male (which may be a young female) are very decidedly unlike the series of *cinereiventris* and like *pallida*. Probably the region is on the boundary between the ranges of the two forms where both styles of coloration can be found.

Myrmotherula menetriesii menetriesii (D'Orbigny)

Myrmothera Menetriesii D'Orbigny, 1838, 'Voy. Amér. Mérid.,' Oiseaux, p. 184—east of Cochabamba in territory of Yuracares Indians; ♂; Paris Mus.

I can find no differences between birds from eastern and southeastern Perú, south of the Amazon, and those from Bolivia. According to Hellmayr (Field Mus. Nat. Hist. Publ., Zool. Ser., XIII, pt. 3, p. 164, 1924) this form ranges west to the Huallaga (Chamicuros) beyond which the east-Ecuadorian *pallida* is found. The range thus embraces the humid Tropical Zone of Perú from the east bank of the Huallaga through the Ucayali and Javari drainages and on the upper western affluents of the Madeira in Bolivia and southeastern Perú (Yahuarmayo). Probably the range extends down the left bank of the Madeira to its mouth, though I have seen no specimens from the Amazon east of Teffé.

A single female from the neighborhood of Borba, on the right bank of the lower Madeira, ought to belong to *omissa* which Todd described from both banks of the Tapajoz, but it is not typical of that form and shows more resemblance to *pallida* than to any other subspecies. Without more material from this region it is unsafe to assign this specimen to one form or the other. Hellmayr's *berlepschi* seems to be restricted to the right bank of the upper Madeira and the adjacent portions of Matto Grosso.

In Perú, *menetriesii* is found most commonly in the lower portion of the Tropical Zone, though the records from Amable Maria and Monterico would indicate an occasional ascent to higher elevations within the zone.

Specimens Examined

M. m. menetriesii.—Bolivia: Todos Santos, 3♂; Mission San Antonio, Río Chimoré, 4♂, 1♀. Perú: Montealegre, Río Pachitea, 1♂; mouth of Río Urubamba, 5♂, 2♀; Santa Rosa, Ucayali, 10♂, 7♀; Lagarto, Ucayali, 1♂, 2♀; Sarayacu, 2♂, 5♀. Brazil: Boca Lago, Teffé, 1♂, 1♀.

M. m. pallida.—VENEZUELA: Nericagua, 1 ♂, 1 ♀; Orinoco R., foot of Mt. Duida, 7 ♂, 11 ♀; Caño León, 10 ♂, 5 ♀; Río Pescada, 1 ♂, 1 ♀; "Campamento del Medio," Mt. Duida, 1 ♂; Savana Grande, 1 ♂, 1 ♀; Lalaja, 1 ♂, 1 ♀; Esmeralda, 4 ♂, 5 ♀; Playa del Río Base, 12 ♂, 10 ♀; Caño Seco, 1 ♂, 2 ♀; Valle de los Monos, 4 ♂, 1 ♀; Río Cassiquiare, El Merey, 5 ♂, 4 ♀; opposite El Merey, 2 ♂, 2 ♀; Río Orinoco, mouth of Río Ocamo, 2 ♂, 6 ♀; opposite mouth of Río Ocamo, 4 ♂, 1 ♀; confluence of Río Huaynía and Río Cassiquiare, 4 ♂, 4 ♀; La Unión, Caura R., 1 ♂; Suapuré, 1 ♂; Mato R., 1 ♂, 1 ♀. BRAZIL: Rio Negro, Tatú, 8 ♂, 6 ♀; Tabocal, 5 ♂, 5 ♀; Yucabi, 1 ♂, 1 ♀; Yavanari, 1 ♀; Mt. Curycuryari, 5 ♂, 1 ♀; Muirapinima, 2 ♂; São Gabriel, 2 ♂, 1 ♀; Rio Uaupés, Tahuapunto, 3 ♂, 6 ♀; Iauarate, 1 ♀. COLOMBIA: La Morelia, 1 ♂, 1 ♀; Río Uaupés, opposite Tahuapunto, Brazil, 1 ♂. ECUADOR: below San José, 3 ♂; lower Río Suno, 3 ♂, 2 ♀; Río Suno, above Avila, 3 ♂, 5 ♀; mouth of Río Curaray, 5 ♂; Río Napo, 1 ♂; mouth of Lagarto Cocha, 1 ♂. PERÚ: Apayacu, 1 ♂, 1 ♀; Puerto Indiana, 2 ♂, 2 ♀.

M. m. cinereiventris.—FRENCH GUIANA: Tamanoir, 2 ♂, 1 ♀. BRITISH GUIANA: Minnehaha Creek, 1 ♂; Tumatumari, 2 ♂, 1 ♀; Potaro Landing, 1 ♀. BRAZIL: Faro, Rio Jamundá, 2 ♂, 5 ♀.

M. m. omissa.—BRAZIL: Rio Tapajoz, Tauarý, 1 ♂, 4 ♀; Rio Madeira, Igarapé Auará (near Borba), 1 ♀.

M. m. berlepschi.—BRAZIL: Rio Roosevelt, 1 ♂, 1 ♀; Barão Melgaço, 1 "♂" [= ♀].

Myrmotherula assimilis Pelzeln

Myrmotherula assimilis PELZELN, 1868 (Sept.), 'Orn. Bras.,' II, p. 152—Amajau (? = Rio Anajahú, part of delta of the Rio Branco), Brazil; Vienna Mus.

A male and two females from Puerto Indiana compare very well with forty-six additional skins from the Rio Negro, Rio Jamundá, Rio Madeira, and Teffé, Brazil. Possibly the male and four females from Teffé are faintly darker than those from more eastern localities, but the difference hardly justifies a name for the western birds.

The only additional records from Perú are those of four males and one female from Nauta, listed by Hellmayr (Novit. Zool., XIV, p. 384, 1907). The range in Perú, as known at present, thus appears to be restricted to the north bank of the Amazon.

SPECIMENS EXAMINED

M. assimilis.—BRAZIL: Igarapé Cacao Pereira, Rio Negro, 1 ♂, 1 ♀; Muiripinima, Rio Negro, 4 ♂, 3 ♀, 1(?); Faro, 3 ♂, 2 ♀; Rosarinho, Rio Madeira, 8 ♂, 1 ♀; Santo Antonio de Guajará, Rio Madeira, 1 ♂; Borba, 2 ♂, 1 ♀, 1 (?); Igarapé Auará (near Borba), 2 ♂, 3 ♀; Villa Bella Imperatríz, 4 ♂, 2 ♀; Teffé, 4 ♂, 2 ♀. PERÚ: Puerto Indiana, 1 ♂, 2 ♀.